

REMARKS

The Applicant has now had an opportunity to carefully consider the comments set forth in the Advisory Action mailed September 7, 2005. The level of detail provided in the Advisory Action is noted with appreciation. Additionally, the Examiner's review of the application and participation in several brief telephone conferences is noted with appreciation. Amendment, reexamination and reconsideration of the application are respectfully requested.

The Advisory Action

In the Advisory Action mailed September 7, 2005, the rejections of the previous Office Action were maintained. Namely:

claims 1-3, 5, 7-8 and 16 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,731,314 to Cheng, et al. ("Cheng");

claims 17-19 were rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 6,308,565 to French, et al. ("French"); and

claims 4, 6 and 9-15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng in view of French.

Summary of Telephone Interviews

On October 12, 2005, Mr. Thomas Tillander, one of the representatives of the Applicant, left a voicemail message for the Examiner asking for confirmation as to whether or not certain papers had been received regarding the present application. Additionally, Mr. Tillander asked the Examiner if certain portions of the Advisory Action were meant to suggest amendments to the claims. No particular claims were discussed. The Examiner, Ms. Alicia Baturay, indicated she would contact Mr. Tillander after reviewing the Advisory Action.

On October 13, 2005, the Examiner telephoned Mr. Tillander to discuss the Advisory Action. Mr. Tillander clarified his question. The Examiner agreed to review the application and contact Mr. Tillander again. No particular claims were discussed and no agreement was reached.

On October 14, 2005, the Examiner contacted Mr. Tillander and indicated that subject matter disclosed in the application beginning on page 10, related to mobility and aspects of the disclosed wireless network, appeared to be novel. No particular

amendments or claims were discussed.

The Present Application

The present application is directed toward virtual reality systems and methods wherein virtual reality environment (VRE) user equipment includes wireless devices such that one or more mobile users at a plurality of locations may simultaneously participate in a virtual reality episode (Abstract). The systems can include elements (e.g., a VRE episode management entity (VEME), VRE episode control entities (VECE)(both serving and proxy) and VRE access systems (VAS)) that maintain information regarding the location of users and/or VRE user equipment (VUE) associated with the user or subscriber during a virtual reality episode and communication links associated therewith and, thereby, allow a VRE episode participant to travel over a wide geographical area while participating in a virtual reality episode (e.g., FIG. 1; paragraphs 28 (page 9, lines 14-29), 35 (page 12, line 3 - page 13, line 14) and 38 (page 14, lines 6-20)). For example, a VAS provides wireless connectivity for a VUE to the virtual reality system (e.g., VAS 108, 168, 184, 144 of FIG. 1; paragraph 28 (page 9, lines 14-29)). For example, a handoff function is performed when the user and/or VUE moves between systems, where the handoff function is similar to that handoff performed when a cellular or wireless telephone moves between cells (paragraphs 31 (page 11, lines 5-21), 35 (page 12, line 3 - page 13, line 14)).

The Cited References

In stark contrast, the primary reference of the Office Action to Cheng allegedly discloses a client computer program that provides instructions for a processor to locate and retrieve rich media and HTML files for running a three-dimensional graphical user interface. The program provides instructions for the processor to generate a three-dimensional (3D) graphical user interface on a display. Then, the processor generates a metaphorical user object for navigating and interacting the three dimensions within the environment via navigational and interactional inputs, respectively, from a user (Abstract).

The previous Office Action and the Advisory Action draw certain analogies between aspects of the browser and browser community of Cheng and elements recited in the claims of the present application. However, even if some of those analogies are

justifiable, it is respectfully submitted that Cheng does not disclose or suggest all of the elements for which it is relied. For example, it is respectfully submitted that Cheng does not disclose or suggest at least one virtual reality environment core system in wireless communication with the at least one virtual reality environment user equipment. Even if the Muse interactivity server 10 and/or the Muse client 8 of FIG. 2 of Cheng are construed to be analogous to a virtual reality environment core system and virtual reality environment user equipment, it is respectfully submitted that Cheng does not disclose or suggest that those two elements are in wireless communication with one another. In this regard, claim 1 of the present application recites at least one virtual reality core system in wireless communication with the at least one virtual reality environment user equipment.

Further in this regard, it is respectfully submitted that the occurrence of the word wireless at column 24, line 18, identified by the previous Office Action, which is included in a definition of the word --latency--, which is in turn included in a glossary incorporated in the application beginning at column 20, line 43, and extending through column 30, line 14, is not fairly construed as a disclosure or suggestion of wireless communication between the Muse client 8 and the Muse interactivity server 10 of Cheng, much less disclosure or suggestion of wireless communication between a virtual reality environment core system and at least one virtual reality environment user equipment.

Moreover, it is respectfully submitted that Cheng does not disclose or suggest aspects of the present application related to providing mobility services to virtual reality environment user equipment (VUE) that are disclosed in the present application and recited in the claims.

For example, it is respectfully submitted that Cheng does not disclose or suggest accessing a home virtual reality environment core system (VCS) or a home VRE subscriber database in order to determine subscription information for a subscriber or VUE associated with a subscriber. Furthermore, it is respectfully submitted that Cheng does not disclose or suggest accessing such a database remotely when the VCS is a visited VCS relative to the user, subscriber and/or VUE as now recited, for example, in claim 1 of the present application.

Additionally, it is respectfully submitted that Cheng does not disclose or suggest handing off connectivity responsibility from a first system element to a second system

element as required by movement of a mobile device VUE as now recited, for example, in claim 16 of the present application.

It is respectfully submitted that French does not remedy these deficiencies of Cheng.

Instead, French allegedly discloses a system and method for tracking and assessing movement skills in multidimensional space. Allegedly, French discloses accurate simulation of sport to quantify and train performance constructs by employing sensing electronics for determining, in essentially real time, the player's three-dimensional positional changes in three or more degrees of freedom (three dimensions); and computer controlled sport-specific cuing that evokes or prompts sports-specific responses from the player that are measured to provide meaningful indication of performance. The sport-specific cuing is characterized as a virtual opponent that is responsive to, and interactive with, the player in real time. The virtual opponent continually delivers and/or responds to stimuli to create realistic movement challenges for the player (Abstract).

It is respectfully submitted that French does not disclose or suggest accessing subscription information, accessing subscription information in a remote VRE subscriber database if a VCS communicating with a VUE is a visited VCS relative to the VUE or handing off connectivity responsibility if required by movement of a mobile device VUE.

The Claims are not Anticipated

Claims 1-3, 5, 7-8 and 16 remain rejected under 35 U.S.C. 102(e) as being anticipated by Cheng.

However, as explained above, it is respectfully submitted that Cheng is not fairly construed as disclosing at least one virtual reality core system in wireless communication with the at least one virtual reality environment user equipment. Cheng does not disclose or suggest that elements 10 and 8 of FIG. 2 are wireless communication. It is respectfully submitted that although the 36 columns of Cheng do include one occurrence of the word --wireless--, the occurrence is included in a definition of the word --latency-- which is included in an over 9-column long glossary appended to the end of the disclosure of Cheng. It is respectfully submitted that this inclusion of the word --wireless-- is not fairly construed as disclosing or suggesting a wireless connection between elements 8 and 10 of FIG. 2 of Cheng. Moreover, it is

respectfully submitted that this occurrence of the word --wireless-- in Cheng does not disclose or suggest at least one virtual reality environment core system and wireless communication with at least one virtual reality environment user equipment as recited in, for example, **claim 1** of the present application.

For at least these reasons, it is respectfully submitted that **claim 1**, as well as **claims 2-8**, which depend therefrom, is not anticipated and is not obvious in light of Cheng.

Furthermore, **claim 1** has been amended to recite at least one virtual reality environment core system, wherein: the core system is in communication with at least two virtual reality environment subscriber databases (VSD), one of which has a relatively local location and at least one of which has a relatively remote location; the virtual reality environment core system being in wireless communication with the at least one said VUE, the core system being operative to access the relatively local VSD, to retrieve respective subscription information of the at least one said VUE, if core system is a respective home core system of the of the at least one said VUE, and to access at least one of the at least one relatively remotely located VSD to retrieve respective subscription information of the at least one said VUE, if the core system is a respective visited virtual reality core system relative to the at least one said VUE

It is respectfully submitted that Cheng does not disclose or suggest accessing local or remote VSD depending on whether a virtual reality environment core system is a home or visited virtual reality environment core system relative to respective VUE.

For at least the foregoing additional reasons, **claim 1**, as well as **claims 2-8**, which depend therefrom, is not anticipated and is not obvious in light of Cheng.

It is respectfully submitted that the amendments to **claim 1** are supported throughout the present application and, for example, page 10, line 17 -- page 11, line 21. It is noted that the Examiner indicated that this portion of the specification appeared to include novel subject matter.

Claim 16 has been amended to recite a plurality of virtual reality environment access systems (VAS), wherein each respective VAS of the plurality provides wireless connectivity for respective ones of the at least one VUE, whereby the respective VAS relays messages between the VUE and the at least one VCS, and wherein responsibility for providing connectivity is handed off from a first respective VCS to a

second respective VCS if the respective ones of the at least one VUE move out of a first geographic region served by the first respective VCS and into a second geographic region that is served by the second respective VCS, and a virtual reality environment episode management entity (VEME), in communication with the at least one user and the at least one VCS, wherein the VEME forwards real time virtual reality data representative of an actual physical environment to the at least one VUE associated with the at least one user through wireless connectivity services of the respective VAS currently serving the at least one VUE of the at least one user based on VUE or user location and/or mobile link information maintained by the VEME.

It is respectfully submitted that Cheng does not disclose or suggest a plurality of virtual reality environment access systems (VAS) wherein each respective VAS of the plurality provides wireless connectivity for respective ones of the at least one VUE. Moreover, it is respectfully submitted that Cheng does not disclose or suggest wherein responsibility for providing connectivity is handed off from a first respective VCS to a second respective VCS if the respective ones of the at least one VUE move out of a first geographic region served by the first respective VCS and in to a second geographic region that is served by the second respective VCS. Furthermore, it is respectfully submitted that Cheng does not disclose or suggest a VEME forwarding real time virtual reality data through wireless connectivity services based on VUE or user location and/or mobility link information maintained by the VEME. For at least the foregoing reasons, it is respectfully submitted that **claim 16** is not anticipated and is not obvious in light of Cheng.

It is respectfully submitted that support for the amendments to **claim 16** can be found, for example, on page 10, line 17 -- page 11, line 21; page 13, lines 9-14; page 14, lines 6-8; page 15, lines 9-18; and FIGS. 1 and 2. It is noted that the Examiner indicated that at least some of those portions of the present specification include novel subject matter.

Claims 17-19 were rejected under 35 U.S.C. 102(e) as being unpatentable over French.

However, **claim 17** has been amended to recite, among other things, accessing a relatively local virtual reality environment subscriber database (VSD) to retrieve subscription information associated with the second user participating in the virtual reality episode, if an entity in communication with the second user is a respective home

virtual reality core system of the second user, accessing a relatively remote VSD to retrieve respective subscription information of the second user if the entity in communication with the second user is a visited virtual reality core system relative to the second user, and wirelessly transmitting the virtual reality data from the second VAS to the second user as authorized by the subscription information associated with the second user, wherein the second VAS and the second user are geographically remote from the first user.

It is respectfully submitted that French does disclose or suggest accessing a relatively local or relatively remote VSD to retrieve subscription information depending on whether a virtual reality core system is a home virtual reality core system or visited virtual reality core system relative to a user.

For at least the foregoing reasons, **claim 17**, as well as **claims 18 and 19**, which depend therefrom, is not anticipated and is not obvious in light of French.

It is respectfully submitted that the amendments to **claim 17** are supported throughout the present application and, for example, beginning on page 10, line 18 -- page 11, line 21, and, for example, page 15, lines 9-18. It is noted that the Examiner indicated that at least some of those portions of the present specification include novel subject matter.

The Claims are not Obvious

Claims 4, 6 and 9-15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng in view of French.

However, **claims 4 and 6** depend from **claim 1** and are not anticipated and are not obvious for at least that reason. **Claim 9** has been amended to, among other things, recite subject matter similar to that discussed above with reference to **claim 17**. In this regard, arguments similar to those submitted in support of **claim 17** are submitted in support of **claim 9**. Cheng and French do not disclose or suggest accessing a relatively local or relatively remote VSD to retrieve respective subscription information of a VUE based on whether or not an entity receiving a request is a respective home or visited virtual reality core system of the VUE.

For at least the foregoing reasons, **claim 9**, as well as **claims 10-15**, which depend therefrom, is not anticipated and is not obvious in light of Cheng and French taken alone or in any combination.

The New Claims are not Anticipated or Obvious

In summary, new **claim 20** recites a VEME, a VECE, and a VAS. The VECE accesses a local VDS if the VECE is a home VECE of a subscriber or VUE or accesses a remote VDS if the VECE is a visited VECE relative to the subscriber or VUE. Additionally, the VECE relays messages between the VUE and the VEME according to subscriber information and mobile links. Additionally, **claim 20** recites that responsibility for providing connectivity is handed off from the VECE if the VUE moves out of a first geographic region served by the first VECE. It is respectfully submitted that support for new **claim 20** is found throughout the present application, including FIGS. 1 and 2; page 9, line 30 -- page 11, line 21; and page 12, line 5 -- page 16, line 7. It is noted that the Examiner indicated that at least some of those portions of the present specification include novel subject matter.

It is respectfully submitted that Cheng and French do not disclose or suggest at least the elements summarized above.

For at least the foregoing reasons, it is respectfully submitted that new **claim 20**, as well as **claims 21** and **22**, which depend therefrom, is not anticipated and is not obvious in light of Cheng and French taken alone or in any combination.

Additionally, new **claim 21** recites, in summary, at least one additional VECE and at least one additional VAS, wherein the at least one additional VECE is operative to control virtual reality episodes associated with at least one additional subscriber using at least one additional VUE by accessing a local or remote VDS based on whether the VECE is a home or visited VECE of the at least one additional subscriber or VUE and providing system access and/or services to the at least one additional VUE and relaying messages between the at least one additional VUE and the VEME according to the subscriber information and the mobile links. The at least one additional VAS is associated with the at least one additional VECE and provides wireless connectivity for the at least one additional VUE if the at least one additional VUE is located in a respective geographic region served by the respective VAS, whereby the respective VAS relays messages between the at least one additional VUE and a respective one of the at least one additional VECE, and wherein responsibility for providing connectivity is handed off from a first respective additional VECE to a second respective additional VECE if the at least one additional VUE moves out of a first additional geographic

region served by the respective first additional VAS and into a second additional geographic region that is served by a second respective additional VAS. It is respectfully submitted that new **claim 21** is supported throughout the present application, including FIGS. 1 and 2 and the portions of pages 9-15 cited above with regard to **claim 20**.

It is respectfully submitted that Cheng and French do not disclose or suggest the additional subject matter recited in new **claim 21**.

New **claim 22** recites a gateway entity that is operative to provide boundary entity services that facilitate a communication of messages between the VECE and the at least one additional VECE, the boundary entity services including at least one of firewall services, hiding underlying network structure, facilitating the flow and routing of virtual reality episode control signals and translating signals between elements in the system. It is respectfully submitted that support for the subject matter of **claim 22** can be found throughout the present application including, FIGS. 1 and 2 and, for example, page 11, line 22 -- page 12, line 4, and page 14, line 30 -- page 15, line 8.

Telephone Interview

In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 1, 2, 3, 9, 16 and 17 have been amended. Claims 20-22 have been added. For at least the foregoing reasons, the application is in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

Respectfully submitted,

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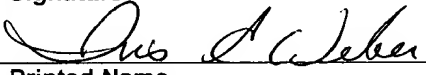
October 26, 2005
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CERTIFICATE OF MAILING

Under 37 C.F.R. § 1.8, I certify that this Amendment is being

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